SIEMENS

LITHOSTAR Multiline

SP

Disposal Instructions

Environmental protection measures

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General information

The regulation regarding electronic scrap presently being formulated requires that manufacturers of systems and equipment dispose of the hazardous materials and components contained in them. Proper disposal procedures for hazardous waste apply not only when scrapping the system but also when replacing hazardous materials while the system is operational.

The list of hazardous materials by product located on page 2-1 of these instructions gives an outline of the assemblies and components subject to mandatory disposal procedures. To assist you in locating the assemblies/components containing hazardous substances in the system, we have included disposal information and illustrations on page 2-2.

The disposal information contained in these instructions applies when scrapping the system or when replacing components and parts containing substances hazardous to the environment.

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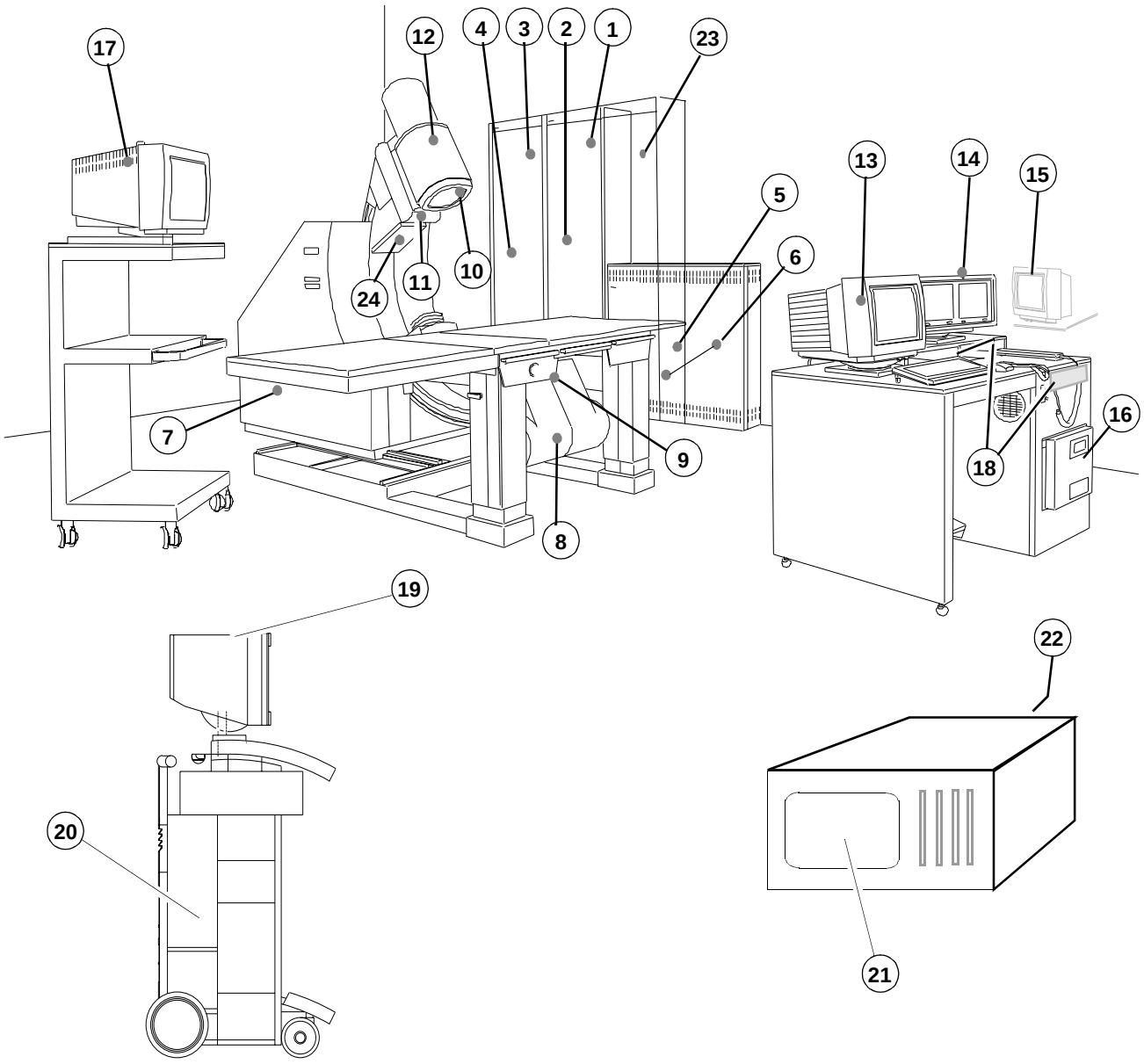
Disposal list

Component Assembly	Location		Harmful substances/ Hazard	Quan-tity	Mea-sure
Battery charger	Shock wave cabinet A13	1	Oil	~ 2 ltr.	Page 3-1
Cooling unit	Shock wave cabinet A13	2	Coolant: R134A	0.88 lb ≙0.4 kg	Page 3-1
Battery	Control cabinet/ MEMOSKOP/Board D1	3	Lithium	1	Page 3-2
Battery	Control cabinet/ Control frame N11Board D1	4	Lithium	1	Page 3-2
Buffer battery in component J32	POLYDOROS LX Board D200	5	Lithium	1	Page 3-3
High-voltage genera-tor	POLYDOROS LX / SX	6	Transformer oil PCB-free	~15 ltr.	Page 3-5
Shock wave generat.	Basic unit HV capacitor	7	Oil inflammable	~2 ltr.	Page 3-6
X-ray tube assembly	C-arm, lower section	8	Lead		Page 3-6
			Oil		Page 3-6
			Implosion of X-ray tube	1	Page 3-7
Collimator	X-ray tube assembly	9	Lead	1	Page 3-6
Grid Centering cross	Image intensifier Image intensifier	10	Lead	1	Page 3-7
Grid	Cassette holder	11	Lead	1	Page 3-7
Image intensifier with Videomed	C-arm, upper section	12	Implosion of X-ray tube	1	Page 3-7
PC monitor	Control console	13	Implosion of picture tube	1	Page 3-8
FL double monitor	Control console	14	Impl. of tube	1	Page 3-8
Physiolog. monitor optional	Control console	15	Implosion of picture tube	1	Page 3-8
MULTISPOT, optional	Control console	16	Implosion of picture tube	1	Page 3-8
FL monitor	Monitor trolley or ceiling mounted support	17	Implosion of picture tube	1	Page 3-8
System PC, keyboard and mouse	Control console	18	Battery	1	Page 3-9
SONOLINE monitor	SONOLINE	19	Implosion of picture tube	1	Page 3-8
Battery	SONOLINE	20	Lithium	1	Page 3-4

Component Assembly	Location		Harmful substances/ Hazard	Quan-tity	Mea-sure
SIRECUST monitor	SIRECUST	(21)	Implosion of picture tube	1	page 3-8
Battery	SIRECUST	(22)	Lithium	1	page 3-4
Buffer battery	POLYDOROS SX in CPU unit	(23)	Lithium	1	page 3-3
Battery	Laser light localizer	(24)	dep. on model	4	page 3-4

Materials/components subject to mandatory disposal



Preparation

- Make sure that the unit and the on-site power supply are switched off.
- Ensure that the system and the on-site power distributor cannot be switched on again.

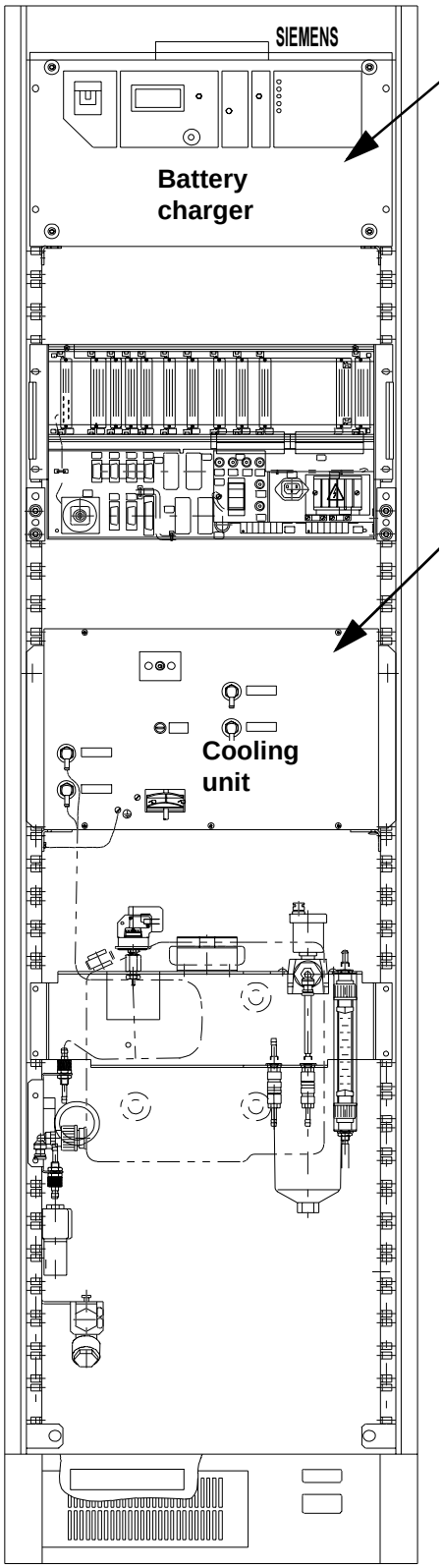


Fig. 1 Shockwave cabinet

Insulating oil in HV battery charger

(when scrapping only)

- Remove the front cover of the shock wave cabinet.
- Take out the battery charger.
- Pour out or draw off the oil of the charger into a suitable container.
- The oil removed must be disposed of by a qualified recycling company.

Coolant in the cooling unit

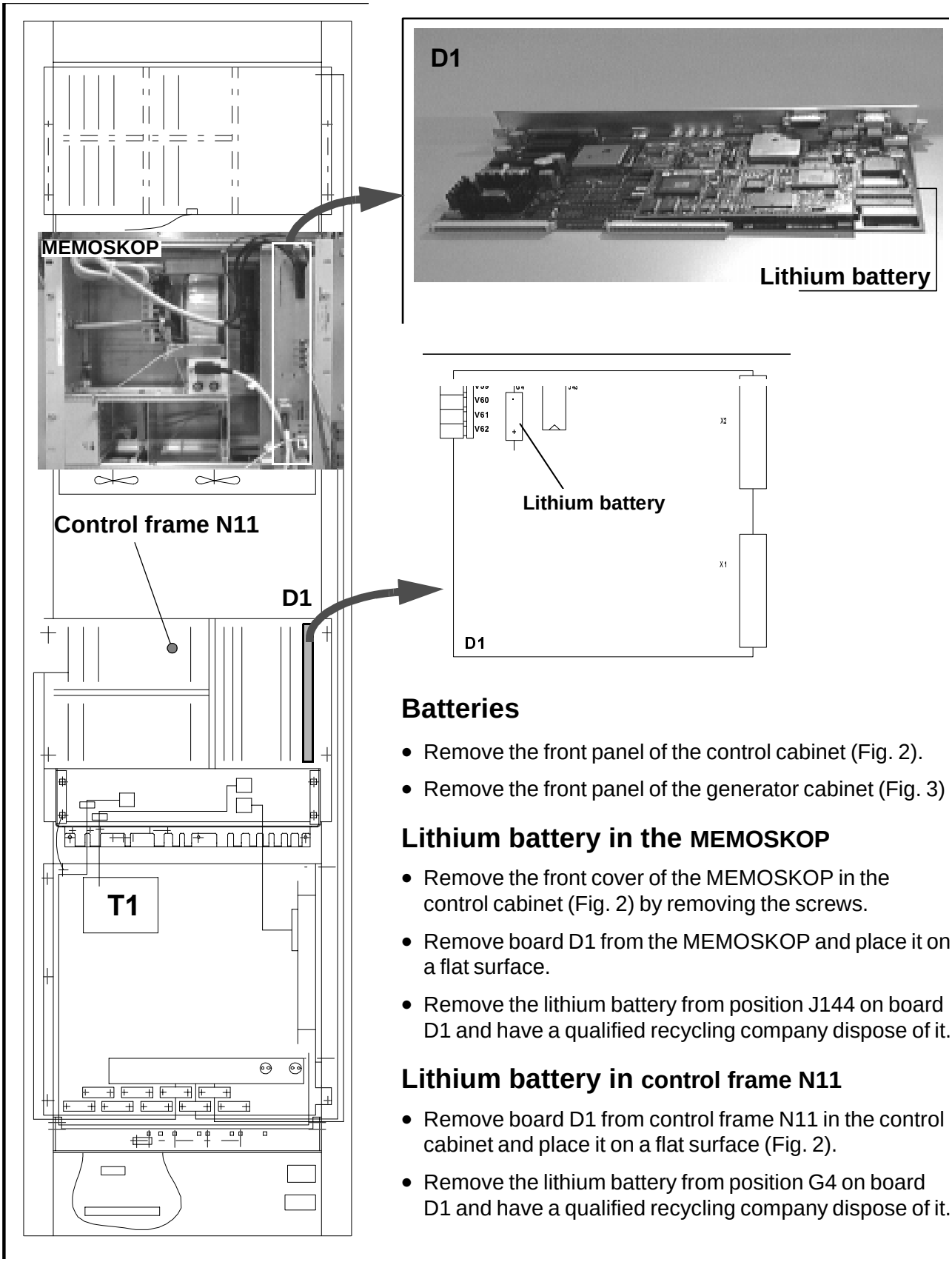
(when scrapping only)

Procedure

- Disassemble the cooling unit
- Pour the coolant, fluorocarbon R134a, into a suitable container.
- The liquid removed must be disposed of by a qualified recycling company.

Protective measures, storage and handling

- Technical protective measures:
  - If vapors or mist can accumulate, ensure sufficient ventilation or exhaust to comply with specified thresholds.
  - Avoid inhaling high vapor concentrations.
  - Since mist and vapor are heavier than air and displace the oxygen, avoid narrow or low working positions. Exhaust must be provided at the lowest working positions.
  - Keep the liquid away from heat and sources of ignition, since it can decompose into toxic by-products if held near open flames or placed on red-hot surfaces.
- Individual protective measures:
  - Use respiratory equipment in closed or insufficiently ventilated rooms.
  - Use safety glasses for eye protection.
  - Use gloves made of chlorbutyl rubber to protect hands.
  - Use lightweight protective clothes and skin protection.
- Work hygiene
  - Do not inhale the vapors.
  - Do not allow the liquid to contact eyes or hands.



Batteries

- Remove the front panel of the control cabinet (Fig. 2).
- Remove the front panel of the generator cabinet (Fig. 3)

Lithium battery in the MEMOSKOP

- Remove the front cover of the MEMOSKOP in the control cabinet (Fig. 2) by removing the screws.
- Remove board D1 from the MEMOSKOP and place it on a flat surface.
- Remove the lithium battery from position J144 on board D1 and have a qualified recycling company dispose of it.

Lithium battery in control frame N11

- Remove board D1 from control frame N11 in the control cabinet and place it on a flat surface (Fig. 2).
- Remove the lithium battery from position G4 on board D1 and have a qualified recycling company dispose of it.

Fig. 2

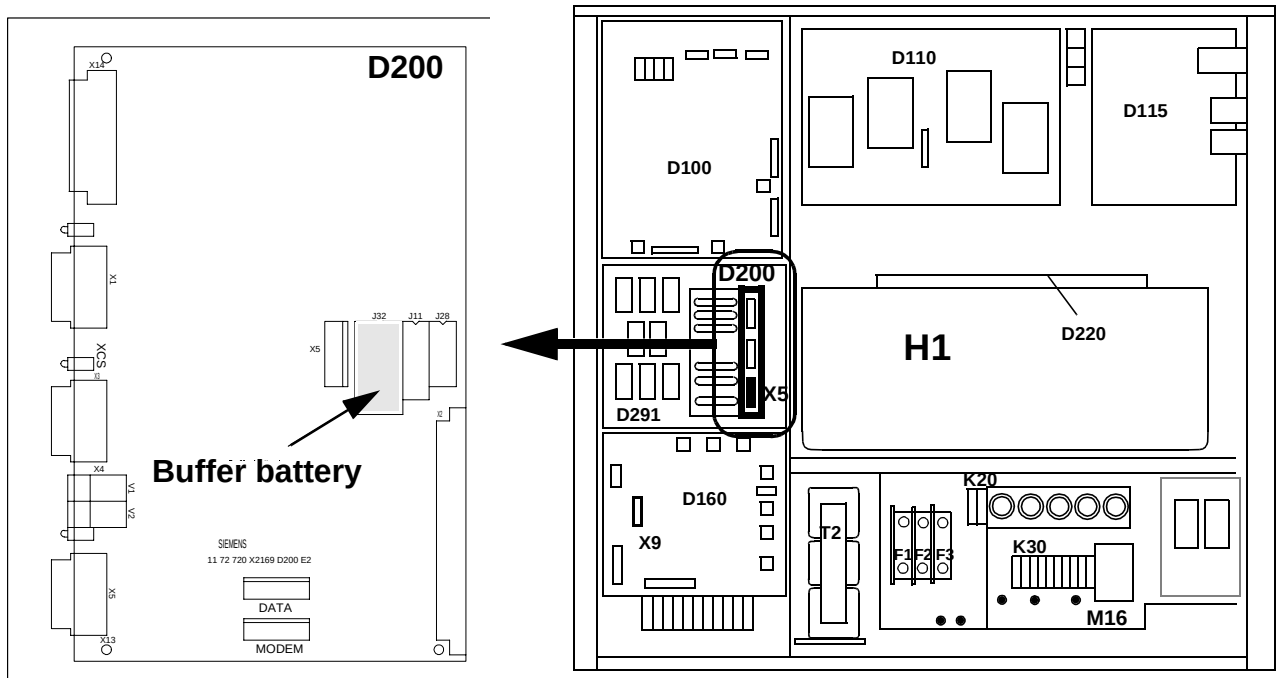


Fig. 3 POLYDOROS LX

Buffer battery in POLYDOROS LX

- Remove board D200 from the generator cabinet and place it on a flat surface (Fig. 3).
- Remove component J32 containing the buffer battery from board D200. (Fig. 3).
- Have the component containing the buffer battery disposed of by a qualified recycling company.

Battery in POLYDOROS SX

- Remove the battery from the CPU HD unit and have a qualified recycling company dispose of it (Fig.4).

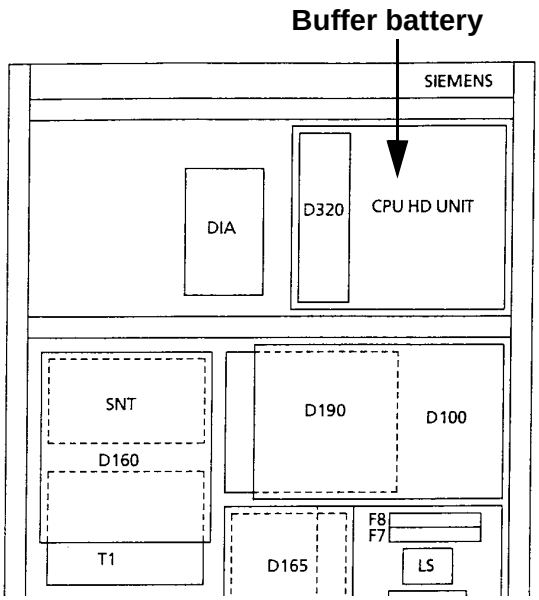


Fig. 4 POLYDOROS LX

Lithium battery in the SONOLINE

- Remove the side panel from the SONOLINE:
- Remove the lithium battery from the SONOLINE and have it disposed of by a qualified recycling company.

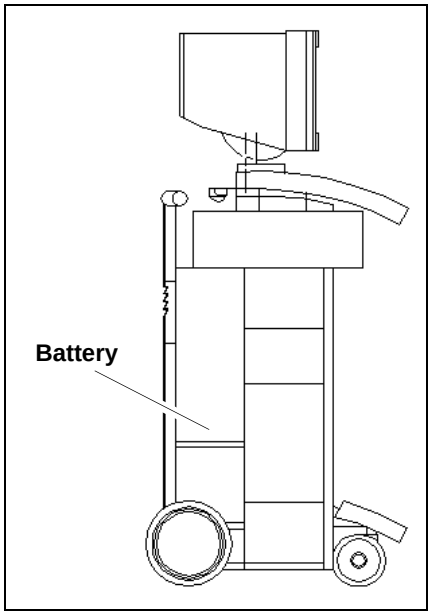


Fig. 5 SONOLINE

Battery in the SIRECUST

- Remove the battery from the back of the SIRECUST and have it disposed of by a qualified recycling company.

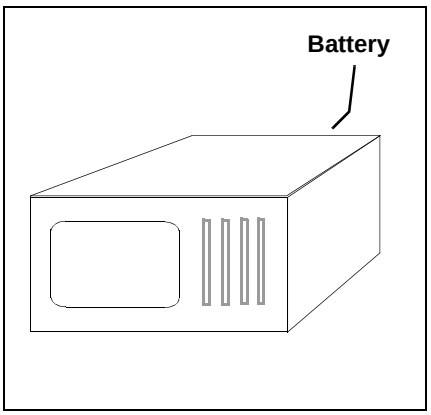


Fig. 6 SIRECUST

Battery in the laser light localizer

- Remove the battery from the laser light localizer and have it disposed of by a qualified recycling company .

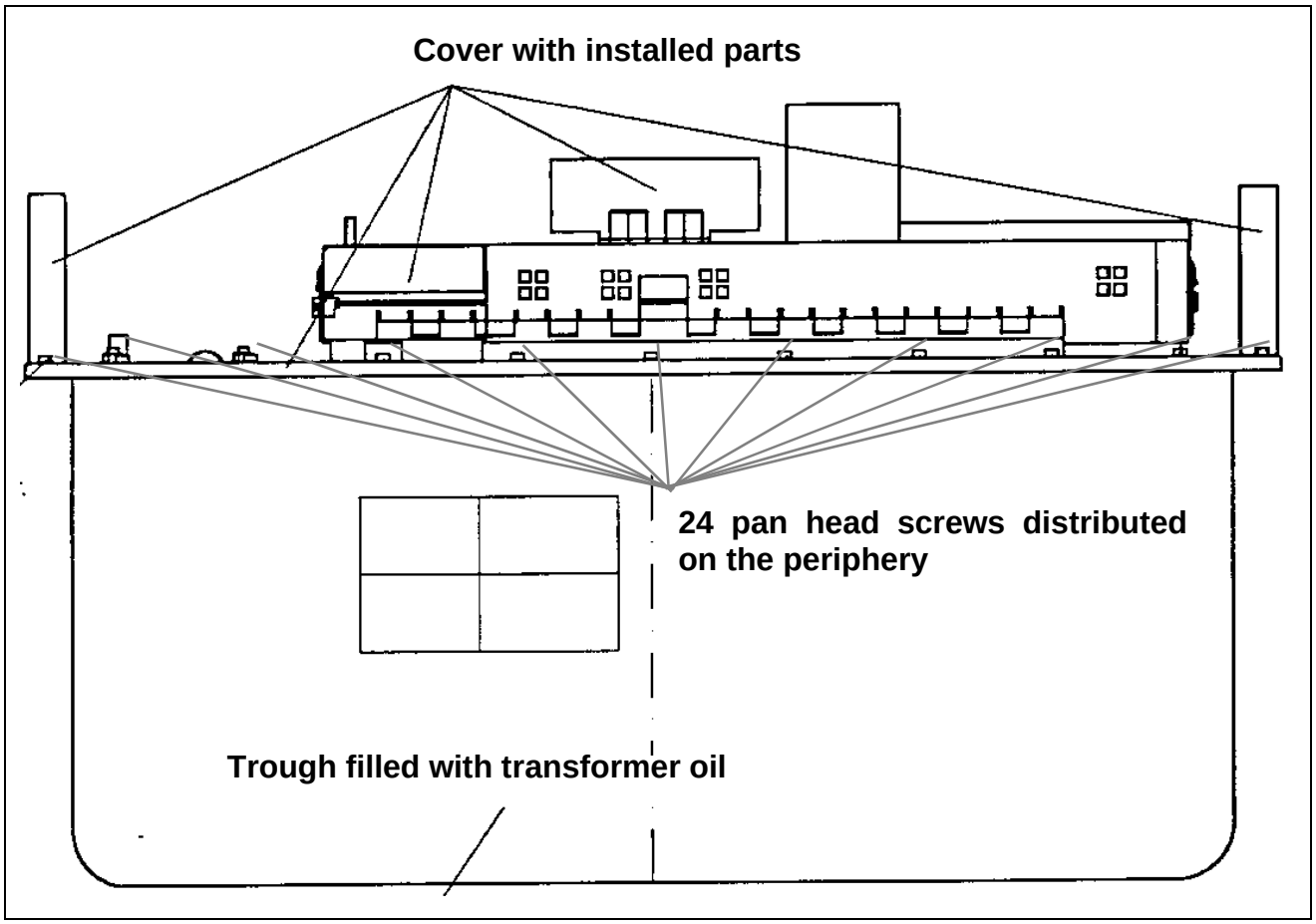


Fig. 7 High-voltage generator

Insulating oil (when scrapping only)

High-voltage generator (POLYDOROS LX and SX)

- Remove the high-voltage generator H1from the generator cabinet (Fig. 3)
- Loosen the 24 pan head screws on the high-voltage generator (Fig.7).
- Lift the cover with the installed parts from the trough of the high-voltage generator and allow the oil to run into the trough.
- Pour the oil from the trough into a suitable container and have it disposed of by a qualified recycling company.

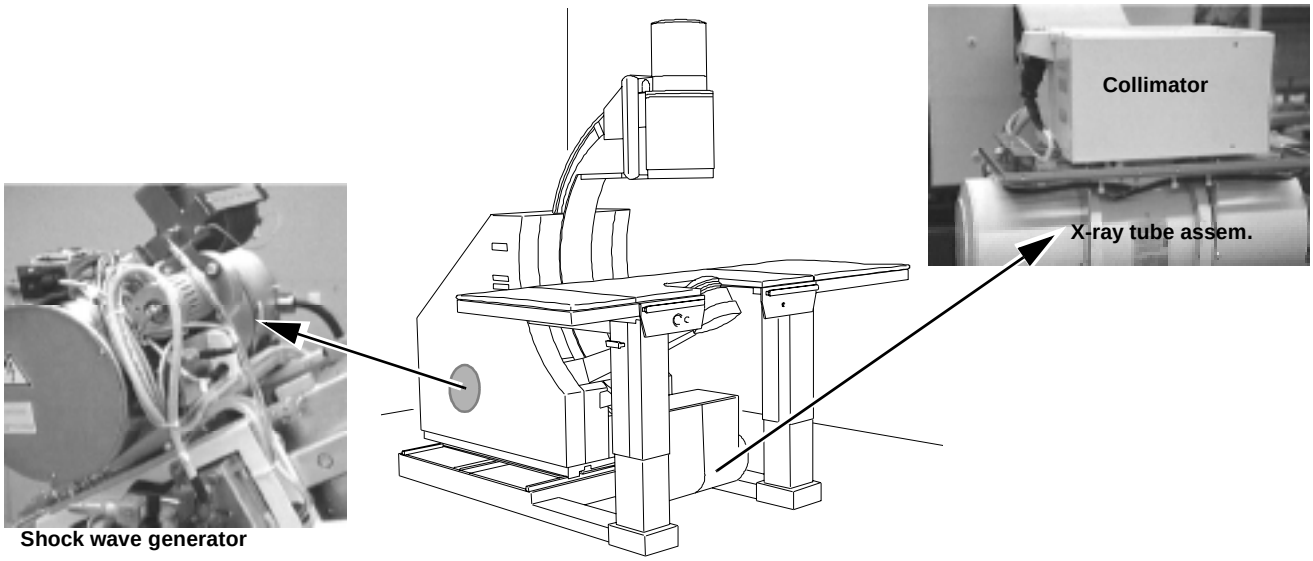


Fig. 8

Shock wave generator

- Remove the panels of the basic unit.
- Remove the shock wave generator from the basic unit (Fig. 8, left).
- Open the shock wave generator by removing the screws and take out the high-voltage capacitor filled with oil.
- Have the entire high-voltage capacitor disposed of by a qualified recycling company or send it back as returned goods to SIEMENS AG, Medical Engineering Group, for reprocessing.

X-ray tube assembly

- Remove the covers of the tube assembly by removing the screws.
- Remove the collimator from the tube assembly (Fig.8, right) by removing the screws.
- Remove the tube assembly filled with oil from the C-arm and send it back as returned goods to SIEMENS AG, Medical Engineering Group for reprocessing.

Lead and components containing lead

X-ray tube assembly

- Due to the lead content of the screens, the tube assembly must be sent back as returned goods to SIEMENS AG, Medical Engineering Group for reprocessing.

Collimator

- Due to the lead content of the blades, the collimator previously removed from the tube assembly must be sent back as returned goods to SIEMENS AG, Medical Engineering Group for reprocessing.

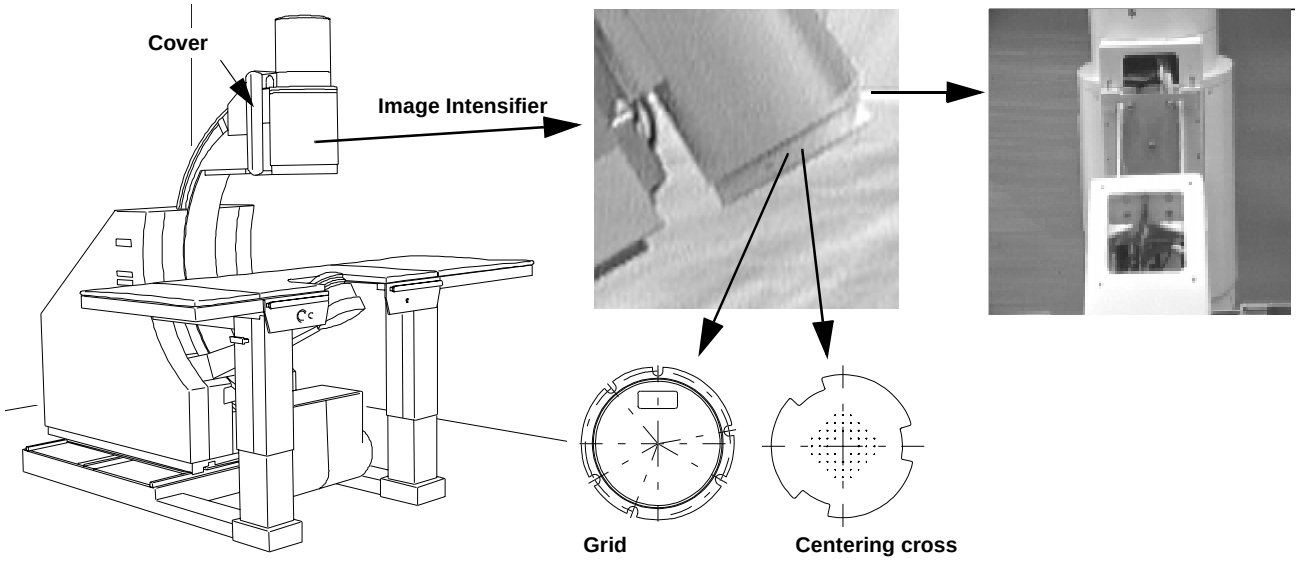


Fig. 9

Grid and centering cross on the I.I.

- Remove the grid and centering cross attached to the I.I. input (Fig. 9).
- Have the grid and the centering cross disposed of by a qualified recycling company (Fig. 9).

Grid on the cassette holder

- Remove the grid from the cassette holder and have it disposed of by a qualified recycling company.

Implosive vacuum components

X-ray tube assembly

- Due to the vacuum X-ray tube, the tube assembly must be sent back as previously described to SIEMENS AG, Medical Engineering Group for reprocessing.

Image intensifier

- Remove the side panels of the I.I. by removing the screws (Fig. 9, left)
- Remove the I.I. from the C-arm (Fig. 9, right)
  and send it back as returned goods to SIEMENS AG, Medical Engineering Group for reprocessing.

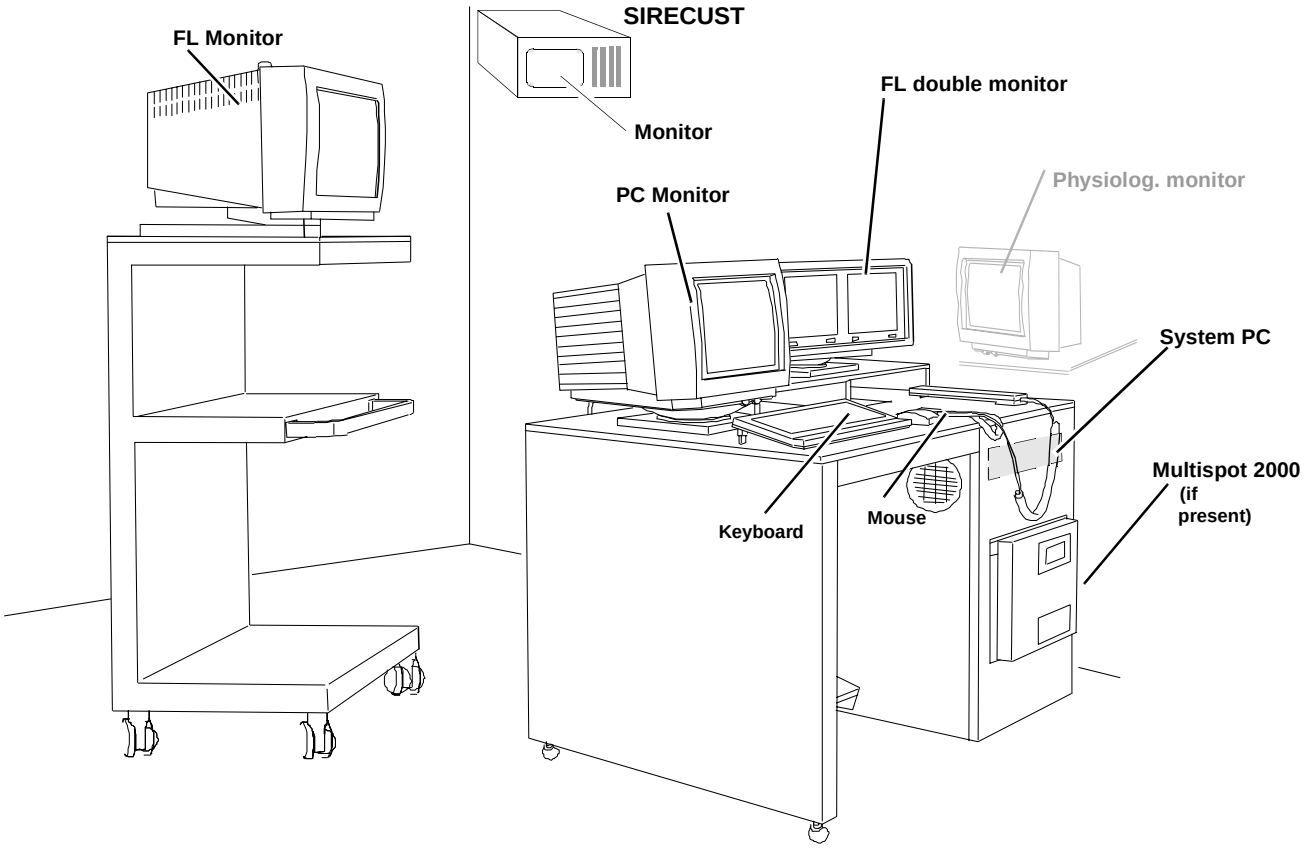


Fig. 10

Monitors

- Send the PC monitor to SIEMENS AG, Medical Engineering or to a qualified recycling company.
- Send the FL double monitor as returned goods to SIEMENS AG, Medical Engineering or to a qualified recycling company.
- Send the FL monitor to SIEMENS AG, Medical Engineering, or to a qualified recycling company.
- Send the physiological monitor, if present, to the Lucius & Baer company or to a qualified recycling company.
- Have the entire SIRECUST system, including the built-in monitor, disposed of by a qualified recycling company or send it as returned goods to SIEMENS AG, Medical Engineering Group.
- Send the SONOLINE monitor as returned goods to SIEMENS AG, Medical Engineering Group, or have it disposed of by a qualified recycling company.

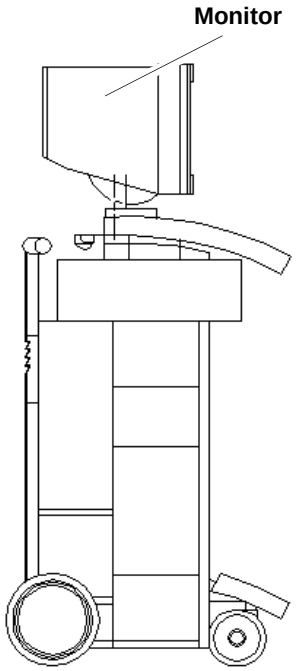


Fig. 11

System PC

- Turn over the system PC (Fig. 10) together with the keyboard and the mouse to SIEMENS AG, Medical Engineering Group or to a qualified recycling company.

MULTISPOT 2000, optional

- Send the MULTISPOT 2000 (Fig. 10), if present, to the Hertel company, Electronics Recycling, Nuremberg, or to SIEMENS AG, Medical Engineering Group.

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Changes as compared to previous version 4 - 1

Chapter 0	Cover page adapted; page containing revision level and table of contents expanded
Chapter 1	Layout changed
Chapter 2	Table and figure changed
Chapter 3	Fig. 4 new; text changes and additions
Chapter 4	Changed in accordance with the new revision level

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TD SP 2 / Wendt
SMS Iselin / Weiss Costa

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